

# C E R D À

U R B S I T E R R I T O R I



TRAVELLING  
EXHIBIT  
PROGRAMME

# Travelling exhibitions programme Cerdà. Planning beyond

## *Sponsor*

Generalitat de Catalunya  
Departament de Política Territorial i Obres Públiques  
(Government of Catalonia  
Department of Planning and Public Works)

## *Organizer*

Institut d'Estudis Territorials  
Consortium composed by Universitat Pompeu Fabra  
and Generalitat de Catalunya

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## ILDEFONS CERDÀ: PIONEER OF MODERN URBAN PLANNING

The freedom of the individual, the privacy of the family, air, sun and natural light in all dwellings, the equalitarian desire for quality services in all city districts and planned urban flow as essential components of regional planning were some of the objectives of the **integral city**. The main features of this city, in the “new civilization” resulting from the harnessing of steam, would be - as he so rightly predicted - mobility and ease of communication. These ideas pervaded the *Projecte d'Eixample de Barcelona* (*Project for the Extension of Barcelona*) in 1859 and formed the basis for *Teoria General de la Urbanizació* (*General Theory of Urban Planning*) in 1863, the two most fundamental works of Ildefons Cerdà, a civil engineer who dedicated himself completely and with great conviction to urban planning.

Recent discoveries concerning Cerdà's theoretical work, a considerable part of which had lain forgotten in various archives, prompted the organization of the exhibition “Cerdà. Urbs i Territori” (Barcelona, September 1994-February 1995), aimed at providing insight into a figure who has been described as a pioneer of modern urban planning and the most important writer of treatises on the subject, and whose ideas have withstood the test of a century and a half of application in Barcelona.

Rather than their undeniable historical value, it was the present-day relevance of Cerdà's ideas that motivated the decision to show *Cerdà. Urbs i Territori, Barcelona and the Extension: Planning Proposals of Ildefons Cerdà* as an itinerant exhibition in several cities around the world and in doing so contribute solutions to the serious and growing problems of major conurbations, many of them immersed in amorphous chaos. The *Eixample* project, in effect a project for a new city, has enabled Cerdà's Barcelona to maintain an exceptional quality to this day, as has begun to be universally acknowledged since the Summer Olympic Games of 1992.

It is astonishing that perhaps the most important of all urban planners, as regards both theory and practical application, has been so little known. Yet it is not a unique case in history. To bring him out of oblivion and help to avoid disasters in an increasingly urbanized world is the best tribute we can pay to Ildefons Cerdà, a progressive who was convinced that simple ideas can spark great solutions.

*Albert Serratosa - Commissioner of the Exhibition*



# Index

CONTENTS OF THE EXHIBIT

TECHNICAL DATA AND COMPLEMENTARY MATERIALS

LECTURES

SUMMARY OF ACTIVITIES



EXHIBITION

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**CERDÀ**

URBS AND TERRITORY

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CERDÀ'S URBAN  
PLANNING PROPOSALS



## Layout

The Exhibition comprises 64 panels grouped into separate theme areas. Each area has a large text panel explaining the contents. There are smaller text panels (labels) for each of the graphic panels.

*A lifetime of service to urban planning*

*Cerdà and the urban planners*

*Cerdà's urban planning theory*

*Cerdà and his background*

*The 1855 Preliminary Project: housing and urban service models*

*The 1859 Reform and Extension Project: a whole-city proposal*

*The 1863 Revised Proposal: adapted to fit in railways*

*The development of Cerdà's urban planning proposals*

*Cerdà's urban planning instruments for the Extension*

*The Barcelona Extension's phases of growth and transformation*

*Cerdà's Extension: a model urban fabric*

## A lifetime of service to urban planning

This area provides a summary of the life of Ildefons Cerdà, in four parallel columns giving major events in chronological order: events in Cerdà's life, his historical context, cities and urbanists, and technological progress. Other panels show the covers of his recently-found theoretical works, thus giving a measure of his treatise writing.



Also included are some of his civil engineering projects which were not strictly related to urban planning (railway and road projects, and the communications plan for the province of Barcelona)

## Cerdà and other urbanists

An analysis of the development of urban planning theories is the starting point for an assessment and comparison of the principles and means proposed by prominent urbanists throughout history; this will provide a measure of the transcendental significance of Cerdà's contributions.



## Cerdà's urban planning theory

Cerdà's recently found papers: the 1855 *Memorandum for the Preliminary Project for the Barcelona Extension*, the 1859 *Theory of City Construction*, the 1861 *Theory of Urban Viability*, the 1863 *Theory of Linkage of Landways and Seaways*, and others afford some insight into the precedents and the conceptual development of his paramount work, *The General Theory of Urbanization*, published in 1867.



Cerdà's basic principles were the freedom of individuals and families within the home and the city, the independence of each separate means of locomotion on any thoroughfare, a high standard of environmental quality (hygienism), egalitarianism and social reform through urban planning.

## Cerdà and his background

The old city of Barcelona was suffering from one of the highest population densities in Europe because demolition of its constricting medieval walls was held up. This, together with other factors, made it impossible for its inhabitants to achieve a decent living environment. Barcelona's urban fabric had all the features of a medieval town unable to cope with the expansion brought about by the Industrial Revolution.



This area of the exhibition analyses (with the use of photographs) the urban planning features of Ciutat Vella, the old city. Everything, from the photograph of the inner courtyard of a block of flats to the one of the whole city, ranging through the streets and the street-blocks, stresses how degraded the city was in the mid-19th century.

## The 1855 Preliminary Project: housing and urban service models

*The Memorandum to the Preliminary Project for the Extension of Barcelona*, written by Cerdà in 1855, was found in 1985, together with its picture atlas, in the Archivo General de la Administración (General Government Archives) in Alcalá de Henares; this has made it possible to identify and study his first planning proposals for the Extension.

This area of the Exhibition centres on the topographical survey carried out by Cerdà in 1855 by government order; it includes the most significant drawings from the picture atlas, giving a view of Cerdà's original proposals.



The pictures show street cross-sections, sewage disposal systems, housing models (for middle-class and working class dwellings), studies of block groupings, etc.. An overall conjectured view of the Barcelona Extension is also given here, based on the study of house groupings proposed by Cerdà. The city he imagined as a means of tackling the “new civilisation” of steam power was already manifesting its essential traits: mobility and communicativity.

## The 1859 Reform and Extension Project: a whole-city proposal

The unbounded expansion of Barcelona was allowed by a Royal Order of 9 December 1858; the city thus ceased to be classed as a military stronghold. Cerdà, who had already drawn up his 1855 Preliminary Project, took this opportunity to submit his Project for the Reform and Extension of Barcelona in 1859. It amounted to a whole new proposal for the city.



The project Memorandum (*Theory of City Construction applied to the Project for the Reform and Extension of Barcelona*) was found in 1985 and the original plan in 1994; this makes it possible to show Cerdà's proposals in minute detail. Diagrams of ward, district and sector layouts; the mathematical formula used to determine the size and shape of the street-blocks; studies of green zones and intersections, etc.; all show Cerdà's true stature as the first theorist of urbanism.

## The 1863 Revised Proposal: adapted to fit in railways

While the building of the Extension was in its early stages, Cerdà was compelled to rework his 1859 proposal. The most significant novelty is the introduction of the railway on a level separate from the street; this, in Cerdà's own words, entails '*the urbanization or domestication of the locomotive*'.



By studying this revised version we can see Cerdà's new urban proposals. A prominent feature is housing adapted to the railway network. This comprises three parallel lines running through the city and integrating dwellings, warehouses and factories (placed level with the railway, below street level). Street-blocks have a greater building density: they are built up on three sides, forming a U-shape, instead of two sides as in the 1859 Project. It all shows the adaptability and flexibility of the rectangular grid proposed for the city. Cerdà's alignments and gradients plan (also shown here) remained in full standing until 1953, when a new Urban Regulating Plan was enacted.

## The development of Cerdà's urban planning proposals

The panels show photographs of the architectural models produced for the Barcelona exhibition. They summarise the development of Cerdà's three successive proposals (1855 Preliminary Project, 1859 Project and 1863 Revised Project) on the scale of the city and of the street-block. There are also perspectives of a city section in each of the three proposals. Overall, this is a clear and precise summary of Cerdà's urban planning discourse, unifying the three previous areas.



## Cerdà's urban planning instruments for the Extension

Cerdà was very actively involved in the actual building of the Extension on several fronts: 1860 through 1865, as technical advisor to the State; 1863 through 1866, as councillor for Barcelona; 1863 through 1865, as Technical Director of the *El Fomento del Ensanche de Barcelona* company, which dealt in real estate and in housing construction within the Extension.



This area analyses the building of the Extension during the early years, while Cerdà was directly involved. The work can be followed by means of hitherto unpublished materials, including survey plans, plot distribution plans and plot adjustment plans drawn up by Cerdà himself. There are also photographs of actual stages in the building process. Despite the fact that the building got off to a slow start, by 1897, when the towns on the Barcelona Plain began to be assimilated into Barcelona, the Extension was far more urbanized.

## The Barcelona Extension's phases of growth and transformation

Although the Extension got off to a slow start, it was already quite developed by 1897, when the towns on the plain began to be absorbed into Barcelona. Even now it stands in sharp contrast to the urban planning anarchy of more modern neighbourhoods. The panels show how the city evolved in different terms: there are charts of population statistics, the development of the municipal building ordinances, and several photographs and plans showing different points in the building process 1860, 1896 and 1994. The Extension has been built to increasing densities historically; this tendency was only slowed in 1970, when extra penthouse floors atop other penthouse floors were banned and finally stopped with the approval of the General Metropolitan Plan (1974-76).



## Cerdà's Extension: a model urban fabric

The city council of Barcelona wanted to influence the building of the Extension directly, through its technical staff. This was made possible by several Royal Orders which granted increasing planning power to the city, to the extent that it was allowed to consider major changes to Cerdà's officially approved Project. The year after the Town Extension Act was approved (29 June 1864), Cerdà resigned as technical advisor to the Civil Government of the province. Thus was his legal framework quashed, and its advanced and specific rules and regulations were not to be taken up until a century later, in the 1956 Land Use Act.



In 1897, the towns on the Barcelona Plain began to be assimilated into Barcelona. The Eixample then became the new city centre. Its configuration, the result of coherent work, stands in stark contrast to the urban and architectural disarray of the more modern neighbourhoods, built without a comprehensive vision, nor functional ambition, nor social concern. The photographs shown in this exhibition area compare the Old City and the Extension, on the one hand, and the Extension to other neighbourhoods and nearby towns. The Extension is also compared to Paris and Rome.



**TECHNICAL DATA AND  
COMPLEMENTARY MATERIALS**

# Technical Sheet

## Venue

The whole exhibition requires 400 square metres, and a total wall length of 150 metres.

## Panels

Photographic reproductions mounted on expanded polystyrene, reinforced with chipboard, framed with metal profiles and protected with 3mm plexiglas

*60 panels..... 1.20 x 1.20 metres*  
*2 panels..... 1.20 x 1.87 metres*  
*2 panels..... 1.20 x 2.15 metres*  
*Total..... 64 panels*

## Models

Plaster on a wooden base, protected by a plexiglas case.

*One model 1.00 x 1.00 x 0.50 metre*

*One model 1.00 x 1.00 x 0.70 metre*

## Text panels

There are 14 panels containing text which explains the contents of each of the areas.

There are also 64 small text panels for the graphic panels, showing their content and source.

## Complementary materials

### “Cerdà. Urbs and Territory.

A vision of the future.’ Catalogue  
Includes the graphic materials from the exhibition, “MOSTRA CERDÀ. Urbs i Territori”, shown in Barcelona 23 September 1994 through 8 February 1995. It also includes a series of articles which interpret Ildefons Cerdà’s theoretical writing. It is available in English, Spanish and Catalan.

### “Cerdà and Barcelona” CD-ROM

A simulation, in three dimensions, of the planning process behind the Barcelona Extension: the 1855 Preliminary Project, the 1859 Project and the 1863 Revised Project. It enables an understanding of the way Cerdà’s different urban planning proposals evolved.

The ‘Cerdà and Barcelona’ CD-ROM is available in three languages: English, Catalan and Spanish.

### Three Proposals for the Barcelona Extension’- Video

Three-dimensional views of modelhousing and details of street construction plunge the viewer into three virtual models of Cerdà’s three separate proposals; they are scaled to show houses, street-blocks, and the city as a whole.

This video requires a VHS videocassette player. ‘Endless’ tapes are available in English, Catalan and Spanish.





# LECTURES

# LECTURE AND SEMINAR PROGRAMME

The aim of the travelling exhibition Cerdà. Urbs i Territori is not only to present an analysis of Cerdà's work but also to serve as an opportunity to study present urban planning through the experience of Barcelona and of Cerdà... 's Extension, so we suggest seminars or lectures to be held in the context of the exhibition.

The Cerdà... Urbs i Territori - IET team offers several topics for debate and different perspectives for comparison of the host city with Barcelona.

Topics linked to Cerdà's urban planning theory and its relevance to the present Cerdà... 's experience and theory are relevant to the following topics, among others:

- New urban planning contributions in Cerdà's work
- Cerdà's urban planning proposal for the Barcelona Reform and Extension Project
- Network urban planning: a reading of Cerdà's theory
- The Barcelona Extension as an example of reticular urban morphology
- Barcelona's urban planning experience: from Cerdà to the 1992 Olympics
- Square-grid cities

## Perspectives for comparison

The following approaches are suggested for comparing the host city's urban planning experience with that of Barcelona:

- Comparing urban planning patterns
- Comparing urban planners
- Comparing urban planning influences
- Comparing urban growth experiences
- Comparing present urban development experience

## Comparing urban planning patterns

Urban growth in Europe generally coincided with the industrial revolution, which significantly extended urban development. Different design patterns emerged to address planning concerns. In the case of Spain, ensanches (extensions) (1859-1930) were the main pattern, made official by the 1864 Extension Act inspired by Cerdà with his 1859 Project for the Barcelona Extension.

If the host city is in Spain, we suggest a comparison of both city's Ensanche experiences. If the host city is outside of Spain we suggest identifying the host country's urban development patterns and comparing them with Ensanches (e.g. hygienist urban planning in the Nordic countries, the Modern movement in the Netherlands and Germany, etc.).

### **Comparing urban planners**

Most cities have experienced some major urban development structuring the whole city, conducted by one urban planner (or several). A comparison of their proposals may thus be of interest (Hobrecht and Cerdà, in Berlin; Haussman and Cerdà, in Paris; etc.).

### **Comparing urban planning influences**

Every town is influenced in its development by a different set of urban planning trends, well worth comparing. In Cerdà's case, the French École des Ponts et Chaussées was a major influence. We suggest identifying a city's urban planning influences through its urban plans and actions (for instance, the influence of the French École des Ponts et Chaussées in Spain, Greece, Morocco, Brazil, etc.; the French Musée Social; the Modern Movement; etc.).

### **Comparing urban planning experiences**

Barcelona's growth hinging on special events (the 1888 and 1929 Universal Expositions, the 1992 Olympics) is worth analysing within the framework of Cerdà's Extension Project. It is interesting to compare this with the host city's experience.

### **Comparing present urban development experience**

Present urban development experience may be compared at two levels:

- At an urban scale: in this case, the Cerdà. Urbs i Territori-IET team can discuss the experience of the Barcelona Olympics.
- At a metropolitan scale: in this case, the Cerdà. Urbs i Territori-IET team can discuss the experience of the Pla Territorial Metropolità de Barcelona (Barcelona Metropolitan Territorial Plan) (1988-1997), as the development team belongs to the Institut d'Estudis Territorials (IET).

### **Scheduling**

Seminars or lectures may be organised at the behest of the host exhibition organiser or any academic institutions or professional associations linked to the Exhibition.

Seminars should be proposed by the exhibition host and organised jointly with the Cerdà Urbs i Territori-IET team.

For lectures, Cerdà. Urbs i Territori-IET has a roster of lecturers specialising in each of the suggested topics.

The cost of organising these events is generally borne by the exhibition hosting body.



## SUMMARY OF ACTIVITIES

**TRAVELLING EXHIBITION PROGRAM**  
**CERDÀ. URBS I TERRITORI - 1995/2000**

**ARGENTINA**

BUENOS AIRES  
Museo Nacional de Bellas Artes

**BRAZIL**

BRASÍLIA  
Palacio Buriti  
XVIII Congreso Pan-americano de Arquitectos

RIO DE JANEIRO  
Instituto de Arquitectos do Brasil-RJ

PORTO ALEGRE  
Museu Universitario - U.F.R.G.S.

BELO HORIZONTE  
Centro Cultural Brasil-Espanha

SALVADOR  
Museu de Arte Sacra

RECIFE  
Galeria Metropolitana Aluisio Magalhaes

NATAL  
Palácio Potegi

SAO PAULO  
Fundação Bienal de Sao Paulo  
III Bienal Internacional de Arquitetura

**CANADA**

MONTREAL  
Centre d'Expositions. Université de Montreal

QUÈBEC VILLE  
Centre de Développement Économique et Urbain

**CHILE**

SANTIAGO  
Centro de Arquitectura y Diseño. Universidad de Chile

**COLOMBIA**

SANTAFÉ DE BOGOTÁ  
Museo de Arquitectura  
Universidad Nacional de Colombia

MANIZALES  
Fondo Cultural - Universidad Nacional de Colombia

**FRANCE**

PERPIGNAN  
Convent des Minimes

TOULOUSE  
Palais des Arts

BORDEAUX  
Hôtel de la Communauté Urbaine

SAINT-DIÉ-DES-VOSGES  
Musée Pierre Noël  
IX Festival International de Géographie

NANCY  
Galerie. Université de Nancy

MONTPELLIER  
Galerie. Université de Languedoc-Roussillon  
III Colloque International "La Ville  
Mediterraneenne"

STRASBOURG  
École d'Architecture de Strasbourg

LYON  
Communaute Urbaine du Grand Lyon

PARIS  
Maison de l'UNESCO

**GERMANY**

BERLIN  
Staatsratsgebäude

**TRAVELLING EXHIBITION PROGRAM**  
**CERDÀ. URBS I TERRITORI - 1995/2000**

**ITALY**

MILANO

Spazio Mostre. Politecnico di Milano

**LUXEMBURG**

LUXEMBURG VILLE

Ancienne Chapelle du Rham

**MEXICO**

MÉXICO D.F

Museo de la Ciudad de México

**MOROCCO**

RABAT

Galerie National Bab Rouah

CASABLANCA

Espace Actua. Banque Commerciale du Maroc

FÈS

Musée National Batha

**SPAIN**

GIRONA

Casa de Cultura

SEVILLA

Antiguo Convento Santa María de los Reyes

MALAGA

Palacio Episcopal

BARCELONA

Palau Robert

XIX Congrès de la Unió Internacional d'Arquitectes

ZARAGOZA

La Lonja

LLEIDA

Col·legi d'Arquitectes - Institut E. Ilerdencs

TARRAGONA

Tinglados. Port de Tarragona

PAMPLONA

Pabellón de Mixtos de la Ciudadela

BILBAO

Colegio Oficial de Arquitectos Vasco-Navarro

MADRID

Real Jardín Botánico

VALENCIA

Sala d'Exposicions de Bancaixa

MANRESA

Museo de la Tècnica de Manresa

VIC

Museo de l'Art de la Pell

**UNITED STATES**

PHILADELPHIA

University of Pennsylvania

**VENEZUELA**

CARACAS

Centro de Exposiciones

Universidad Central de Venezuela